

# TRANSPORTATION OF a&e

# Hazards of Electromagnetic Radiation to Ordnance (HERO)

# NAVSEA OP 3565, Volume 2

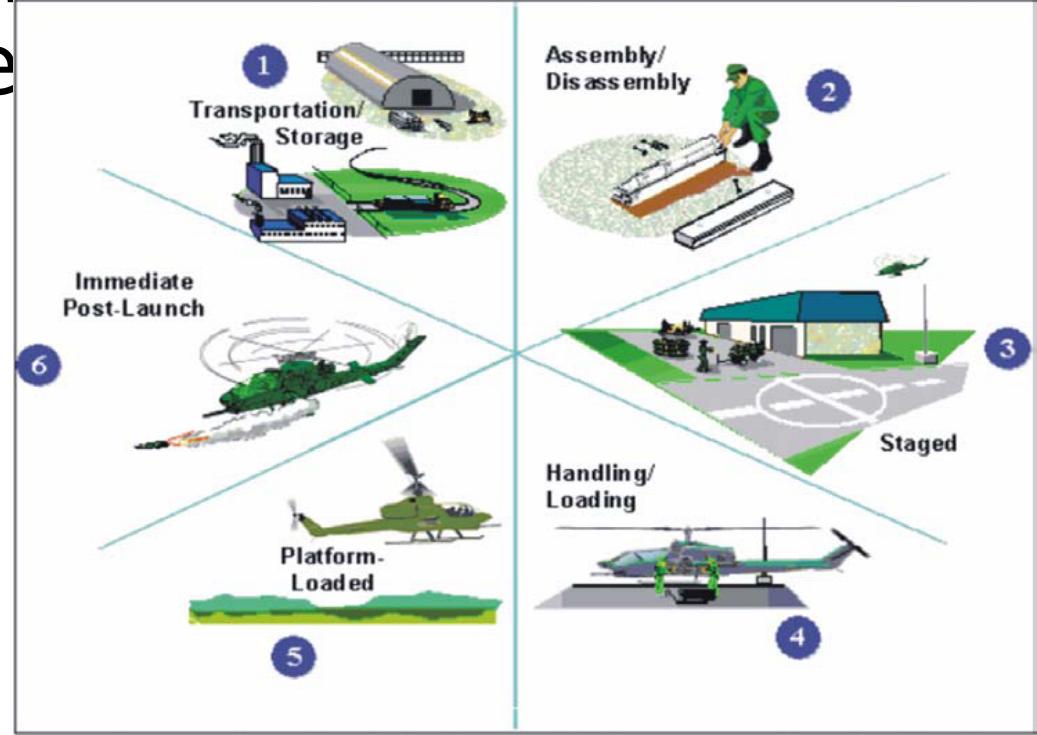
- Pertains to the Hazards of Electromagnetic Radiation to **Ordnance**.
- Provides precautions and procedures for electrically initiated ordnance when the possibility of exposure to RF environments exist for:
  - Handling
  - Transporting
  - Storing

# Hazards of Electromagnetic Radiation to Ordnance

- HERO is the program concerned with the prevention of accidental ignition of electrically initiated devices (EIDs) in ordnance due to Radio Frequency (RF) electromagnetic fields.
- RF corresponds to the frequency of radio waves, and the alternating currents which carry radio signals (i.e. radios, radar, electronic countermeasures, ground penetrating radar etc).

# Electromagnetic Radiation

- Electromagnetic (EM) radiation hazards stem from the functional characteristics of electrically initiated ordnance. Accidental initiation of ordnance is most susceptible to RF energy.
  - Assembly
  - Disassembly
  - Handling
  - Loading
  - Unloading



# Need for HERO Control

- EIDs perform a variety of functions, such as initiating rocket motors, and arming and detonating warheads.
- The need for HERO control arises so that these functions do not occur unintentionally or prematurely due to exposure to EM energy.
- There are 2 potential forms of unintentional, RF-induced EID response:
  - Activation
  - Degradation

# HERO Classifications

- **HERO SAFE** – No hazards exist.
- **HERO SUSCEPTIBLE** - Ordnance that is fully assembled undergoing normal handling and loading operations.
- **HERO UNSAFE** – Explosives devices with exposed wires arranged in the most optimum receiving orientation.
- **HERO UNRELIABLE** – status of explosive item is undetermined.

# Universal Safety Precautions

- Establish procedures to positively control RF transmitting equipment.
- Do not turn on any transmitting equipment without proper authorization from the supervisor in charge of operations.

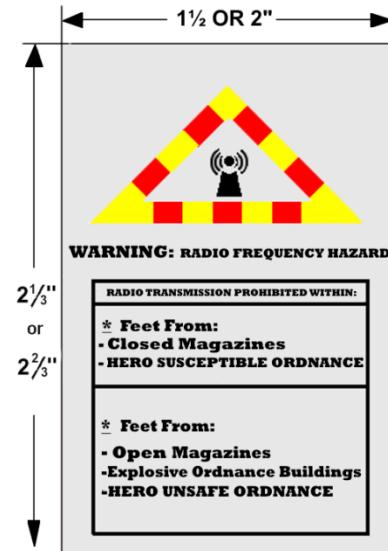
# HERO Warning Symbols and Labels

- Warning symbols shall be posted at any location where radar equipment or other possible sources of EMR might create the potential for premature initiation due to HERO. Cell phones and radios will not be used, as they create a potential hazard for



# HERO Warning Symbols and Labels (cont)

- Warning labels are to be affixed to portable and mobile radios.
- Required for use aboard both ship and shore locations.



# General Safety and Administration

# Requirements and Qualifications

- Military drivers must have a valid state license when driving off base.
- Driver Improvement Card (Under 26)
- Valid Medical Examiners Certificate
- Valid Government Motor Vehicle Operators Identification Card (OF-346)

# Requirements and Qualifications (cont) Medical Examinations

- Military and Civilian drivers must have a Medical Examiner's Certificate

DEPARTMENT OF NAVY		OPNAVINST 8023.24
EXPLOSIVE VEHICLE OPERATOR	MEDICAL EXAMINER'S CERTIFICATE	EXPLOSIVE VEHICLE OPERATOR
I certify that I have examined _____ regulations and with knowledge of the driving duties I find this person is qualified; and if applicable, only when:		in accordance with FMCSA 49 CFR 391.41-391.49
<input type="checkbox"/> Wearing corrective lenses		<input type="checkbox"/> Wearing hearing aid (s)
The information I have provided regarding this physical examination is true and complete. A complete exam form with any attachment embodies my findings completely and correctly and is on file in my office.		
Signature of Medical Examiner	Telephone No.	
Date of Examination	Medical Certificate Expiration Date	
Medical Examiner's Name (print)	<input type="checkbox"/> MD	<input type="checkbox"/> Physician's Assistant
	<input type="checkbox"/> DO	<input type="checkbox"/> Advanced Practice Nurse
Medical Examiner's License/Cert. No./Issuing State		
Signature of Driver	Driver License No.	State
Driver Address (Street, City, State, Zip)		

NOTE: Driver MUST carry a copy of this certificate when operating an explosive motor vehicle in accordance with 49 CFR 391.41 (a).  
This Explosive Vehicle Operator Medical Certificate is also valid for Explosive Material Handling (711) and Firearm operation (710).  
OPNAV 8020-6 (Rev 8-2008)

# Requirements and Qualifications (cont)

## **OF-346**

- Drivers of government owned vehicles must have a valid OF-346. The OF-346 **must** be annotated with the following:

**“Explosives Driver - Must hold  
a  
current Medical Certificate”**

# Requirements and Qualifications (cont)

## **AGE AND EXPERIENCE**

- Drivers must be 18 for on-base movements.
- Drivers must be 21 for off-base movements.
- Drivers must have a safe driving record, and possess the required training and experience for the equipment being operated.

# Authorized Drivers

## **OFF-STATION DRIVERS/RIDERS**

- Two explosive drivers are required for all off-base A&E movements.
- When a motor vehicle that has seating for three or more passengers is used, only the two assigned explosives drivers shall occupy the cab of the vehicle.

\* No other passengers are permitted either in the cab or in the cargo compartment.

# Authorized Drivers (cont)

## **ON-STATION DRIVERS/RIDERS**

- Three passengers are permitted in the cab of three passenger vehicle on base.
- No passengers are permitted to ride in cargo area.

# Off Base Shipments

- An approved route plan is required for off base movement of hazard class/division 1.1-1.4 A&E.
- Route plan must have:
  - Strip Map (most direct and efficient route possible to avoid hazards)
  - Communication Plan (HERO)
  - Security Plan
  - Recovery Plan
  - Refueling Plan
  - Rest stops

# Off Base Shipments Route Plan

## (cont)

- Route plan should not be changed except in case of emergency unless:
  - Order of the CO, safety officer, ordnance officer, or designated representative
  - Direct orders of law enforcement officials
  - During dangerous electrical storms
  - Detours
  - Safe haven is required due to civil disturbance or natural disaster
  - Accident, incidents, or breakdown which justifies towing (after unloading) to another location

# General Safety Rules

- Explosive drivers shall observe the following:
  - Posted speed limits
  - Observe/Obey all road signs
  - Maintain safe clearance for bridges/tunnels
  - Use caution when passing or being passed
  - Use directional turn signal lights
  - Use caution when passing stationary bus/streetcar
  - Use caution when approaching emergency vehicles

# General Safety Rules (cont)

- Explosive drivers shall observe the following:
  - Observe right of way
  - Ensure vehicle and cargo are secure at all times
  - Maintain a safe distance for traffic and road conditions
  - Exercise caution when passing/near a fire
  - Obey all local civil/on-station regulations on the use of cell phones while driving
  - Wearing portable headphones, earphones, or

# PLACARDS AND COMPATIBILITY

# Cargo Hazard Classification

- There are nine hazard classes.
- A Hazard Class is based on chemical and physical characteristics of the material and its reaction under various conditions.
- **Hazard Class 1** - generally containing ammunition, explosives substances, and explosive articles.
- Vehicles transporting hazard class/division 1.1-1.4 A&E require placards.

# Cargo Hazard Classification

- Hazard Class Divisions composed of 6 divisions based on the type and magnitude of the explosive hazard and associated safety risks.

1. Mass Detonation
2. Explosion with fragmentation hazard
3. Mass fire
4. Moderate fire
5. Very insensitive explosive substance with a mass explosion hazard (blasting agents)
6. Extremely insensitive explosive article; non-

# Compatibility Groups

- A&E is further categorized in to 13 compatibility groups.
- A, B, C, D, E, F, G, H, J, K, L, N, S
- Compatibility is based on the type/degree of risk the A&E items present in storage and transportation.
- Compatibility groups determine what A&E can be stored or transported together without increasing the probability of accident or magnitude of an accident.

**Table 2-6. Compatibility Requirements for Class 1 (Explosive) Materials Loaded On and Transported by Motor Vehicle Over Public Highway or by Railcar**

Compatibility Group	A	B	C	D	E	F	G	H	J	K	L	N	S
A		X	X	X	X	X	X	X	X	X	X	X	X
B	X		X	X(4)	X	X	X	X	X	X	X	X	4/5
C	X	X		2	2	X	6	X	X	X	X	3	4/5
D	X	X(4)	2		2	X	6	X	X	X	X	3	4/5
E	X	X	2	2		X	6	X	X	X	X	3	4/5
F	X	X	X	X	X		X	X	X	X	X	X	4/5
G	X	X	6	6	6	X		X	X	X	X	X	4/5
H	X	X	X	X	X	X	X		X	X	X	X	4/5
J	X	X	X	X	X	X	X	X		X	X	X	4/5
K	X	X	X	X	X	X	X	X	X		X	X	4/5
L	X	X	X	X	X	X	X	X	X	X	1	X	X
N	X	X	3	3	3	X	X	X	X	X	X		4/5
S	X	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	X	4/5	

Numbers and symbols shown in this table are as follows:

A blank in the table indicates that no restrictions apply.

For motor vehicles the letter "X" in the table indicates that explosives of different compatibility groups may not be carried on the same motor vehicle. For rail cars the letter "X" indicates that explosives of different compatibility groups may not be carried on the same railcar unless packed in separate freight containers (e.g. two or more freight containers mounted upon the same rail car).

1 - means explosives from compatibility group L may only be carried on the same motor vehicle or rail car with an identical explosive.

2 - means any combination of explosives from compatibility group C, D, or E is assigned to compatibility group E.

3 - means any combination of explosives from compatibility group C, D, or E with those in compatibility group N is assigned to compatibility group D.

4 - means detonators and detonating primers, Division 1.4S (Class C explosives), may not be loaded in the same rail car with Division 1.1 and 1.2 (Class A explosive) materials as described in [49 CFR 174.81 \(g\)\(3\)\(iv\)](#). Also, see [49 CFR 177.835 \(g\)](#) for restrictions on detonator assemblies, boosters with detonators, and detonators when transported on public highway.

5 - means Division 1.4S fireworks may not be loaded in the same motor vehicle or rail car with Division 1.1 or 1.2 (Class A explosive) materials.

6 - means explosive articles in compatibility group G, other than fireworks and those requiring special handling or stowage, may be loaded, transported, and stored with other explosive articles of compatibility groups C, D and E, provided that no explosive substances (such as those not contained in articles) are carried in the same vehicle or railcar.

# Placards

- Every motor vehicle transporting Class/Division 1.1 through 1.4 on or off base is required to be placarded.
- Motor vehicles must be placarded with the highest hazard of material being transported.
- The driver is responsible for ensuring that the appropriate placards are properly mounted on the motor vehicle before it is

# Placards (cont)

## **SIZE AND SHAPE**

- Placards shall be orange with black lettering, diamond shaped, and printed horizontally left to right and easily legible.



- Example of 1.1 placard:

# Placards (cont)

## **LOCATION AND DISPLAY**

- Placards must be placed so that it is visible on the front, rear, and both sides of the vehicle.
- If a trailer is attached to the vehicle, placards will be placed on all sides of the vehicle, as well as the trailer, with a total of 8 placards visible.

# Placards (cont)

## **LOCATION AND**

## **DISPLAY**

- Be securely attached to or placed in a holder.
- Be located clear of equipment and devices such as: pipes, ladders, doors, and tarpaulins.
- Be located so dirt or water is not directed to it from the wheels of the vehicle.
- Have its print displayed horizontally, reading from left to right.
- Will **not** be applied directly to A&E on

# Placards (cont)

## **REMOV AL**

- Placards will be removed or covered once vehicle no longer contains the A&E it was transporting.
- Motor vehicles must be placarded with the highest hazard of material being transported.

# PREPARATION FOR SHIPMENT BY MILITARY AND COMMERCIAL MOTOR VEHICLES

# Military and Commercial Vehicle Specifications

- Hazard Class/Division 1.1 – 1.6 A&E may be transported on-station and over public highways in the following:

- Trucks
- Full trailers
- Semi-trailers
- Double trailers equipped with closed bodies.
- Flatbeds
- Pickup trucks
- Stake-sides
- 
- Dromedaries
- Open tops

# Military and Commercial Vehicle Specifications (cont)

## **STAKE- SIDES/OPEN TOPS**

- Side and end members or gates must be of such strength to contain all units or portions of the cargo.

# Military and Commercial Vehicle Specifications (cont)

## **PICKUP TRUCKS**

- Must have hard covers securely bolted to the side rail of the cargo compartment and a lockable tailgate.
- Cargo must be properly blocked and braced to prevent movement.
- Use shall be kept to a minimum.
- Plastic bed liners are not authorized.

# Military and Commercial Vehicle Specifications (cont)

## **TACTICAL VEHICLES**

The following tactical vehicles are authorized for transport of A&E:

- HMMWV's
- AAV's
- 7-tons
- LVS's

# Military and Commercial Vehicle Specifications (cont)

- All motor vehicles must have a closed body or the A&E must be covered with a fire and water-resistant tarpaulin.
- Military motor vehicles may be exempt from the tarpaulin requirement during clear weather.
- Tarpaulin must be securely fastened to the vehicle.

# Safety Equipment

- One fully charged, UL rated 10 B:C or greater capacity fire extinguisher
- Tools for changing tires (if vehicle is equipped with spare tires)
- One set of wheel chocks.



# Empty Vehicle Inspection

- Will be conducted by the shipping inspector prior to loading A&E utilizing the DD Form 626.
- Shipping inspector and driver share responsibility for the complete inspection of the vehicle.
- The shipping inspector shall inspect:
  - Cargo space
  - Mechanical condition of vehicle
  - Licensing endorsements (OF-346/State drivers license)
  - Current medical examiners certificate

# Empty Vehicle Inspection (cont)

- Explosive Driver Endorsement
- Glove Box Edition (SWO20 -AF-HBK-010)
- Placards
- Warning Devices
- Wooden pallet
- Cargo straps

# DD Form 626

- Completed every time a motor vehicle arrives at, or leaves a naval activity.
- Vehicles with unsatisfactory conditions will not be accepted unless deficiencies are corrected prior to loading.
- Driver is required to participate in the inspection and sign the form. By signing, the driver shares responsibility with the inspector for the suitability and safety of the load.

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)										
(Read Instructions before completing this form.)										
This form applies to all vehicles which must be marked or placarded in accordance with Title 49 CFR.					1. GOVERNMENT BILL OF LADING/TRANSPORTATION CONTROL NUMBER <b>GBL 1234567</b>					
SECTION 1 - DOCUMENTATION					ORIGIN a.		DESTINATION b.			
2. CARRIER/GOVERNMENT ORGANIZATION					<b>MCD RSA</b>					
3. DATE/TIME OF INSPECTION					<b>080227</b>					
4. LOCATION OF INSPECTION					<b>BLDG SH-61</b>					
5. OPERATOR(S) NAME(S)					<b>PFC JARHEAD</b>					
6. OPERATOR(S) LICENSE NUMBER(S)					<b>01234</b>					
7. MEDICAL EXAMINER'S CERTIFICATE*					<b>040213</b>					
8. (X if satisfactory at origin)										
a. MILITARY HAZMAT ENDORSEMENT		<input checked="" type="checkbox"/>		d. ERG OR EQUIVALENT COMMERCIAL:		<input checked="" type="checkbox"/> YES		NO		
b. VALID LEASE*		<input checked="" type="checkbox"/>		e. DRIVER'S VEHICLE INSPECTION REPORT*		<input checked="" type="checkbox"/>		X		
c. ROUTE PLAN		<input checked="" type="checkbox"/>		f. COPY OF 49 CFR PART 397		<input checked="" type="checkbox"/>		X		
SECTION II - MECHANICAL INSPECTION <i>All items shall be checked on empty equipment prior to loading. Items with an asterisk shall be checked on all incoming loaded equipment.</i>										
10. TYPE OF VEHICLE(S) <b>TRUCK</b>					11. VEHICLE NUMBER(S) <b>T-2205</b>					
12. PART INSPECTED (X as applicable)	ORIGIN (1)		DESTINATION (2)		ORIGIN (1)		DESTINATION (2)		COMMENTS (3)	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT		
a. SPARE ELECTRICAL FUSES	<input checked="" type="checkbox"/>		k. EXHAUST SYSTEM		<input checked="" type="checkbox"/>					
b. HORN OPERATIVE	<input checked="" type="checkbox"/>		l. BRAKE SYSTEM*		<input checked="" type="checkbox"/>					
c. STEERING SYSTEM	<input checked="" type="checkbox"/>		m. SUSPENSION		<input checked="" type="checkbox"/>					
d. WINDSHIELD/WIPERS	<input checked="" type="checkbox"/>		n. COUPLING DEVICES		<input checked="" type="checkbox"/>					
e. MIRRORS	<input checked="" type="checkbox"/>		o. CARGO SPACE		<input checked="" type="checkbox"/>					
f. WARNING EQUIPMENT	<input checked="" type="checkbox"/>		p. LANDING GEAR*		<input checked="" type="checkbox"/>					
g. FIRE EXTINGUISHER*	<input checked="" type="checkbox"/>		q. TIRES, WHEELS, RIMS		<input checked="" type="checkbox"/>					
h. ELECTRICAL WIRING	<input checked="" type="checkbox"/>		r. TAILGATE/DOORS*		<input checked="" type="checkbox"/>					
i. LIGHTS AND REFLECTORS	<input checked="" type="checkbox"/>		s. TARPAULIN*		<input checked="" type="checkbox"/>					
j. FUEL SYSTEM*	<input checked="" type="checkbox"/>		t. OTHER (Specify)		<input checked="" type="checkbox"/>					
13. INSPECTION RESULTS (X one) <b>ACCEPTED</b> <input checked="" type="checkbox"/>					REJECTED <input type="checkbox"/>					
(If rejected give reason under "Remarks". Equipment will be approved if deficiencies are corrected prior to loading.)										
14. SATELLITE MOTOR SURVEILLANCE SYSTEM: (X one) <b>ACCEPTED</b> <input checked="" type="checkbox"/> REJECTED <input type="checkbox"/>										
15. REMARKS <b>HEAD LIGHT HAS SLIGHT FLICKER</b>										
16. INSPECTOR SIGNATURE (Origin) <b>X</b>					17. INSPECTOR SIGNATURE (Destination)					
SECTION III - POST LOADING INSPECTION <i>This section applies to Commercial and Government/Military vehicles. All items will be checked prior to release of loaded equipment and shall be checked on all incoming loaded equipment.</i>										
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR					ORIGIN (1)		DESTINATION (2)		COMMENTS (3)	
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT					SAT	UNSAT	SAT	UNSAT		
20. SEALS APPLIED TO CLOSED VEHICLE; TARPAULIN APPLIED ON OPEN EQUIPMENT					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
21. PROPER PLACARDS APPLIED					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
22. SHIPPING PAPERS/DD FORM 836 FOR GOVERNMENT VEHICLE SHIPMENTS					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
23. COPY OF DD FORM 626 FOR DRIVER					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
24. SHIPPED UNDER DOT EXEMPTION 868					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
25. INSPECTOR SIGNATURE (Origin) <b>X</b>					26. DRIVER(S) SIGNATURE (Origin) <b>X</b>					
27. INSPECTOR SIGNATURE (Destination)					28. DRIVER(S) SIGNATURE (Destination)					

# DD Form 626

- Upon completion of the inspection, the vehicle will be approved or rejected.
- Inspector will sign the form at origin and destination.
- Driver will sign at origin if the vehicle is accepted or rejected, and again at destination.

# DD Form 836

- Originated by the shipping activity
- Provides the driver with emergency response instructions.
- Applies specifically to the A&E being transported.
- Provides safety precautions and emergency measures.
- Driver must keep this form in the vehicle at all times while transporting A&E.

**HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT****DANGEROUS GOODS SHIPPING PAPER/DECLARATION AND EMERGENCY RESPONSE INFORMATION  
FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES**

a. NOMENCLATURE: b. MODEL NO.: c. BUMPER NO.:	d. CONTAINER SEAL NO.: e. SERIAL NO.: f. TCN NUMBER:							
2. SHIPPER NAME/ADDRESS/TELEPHONE NO./DATE OF PREPARATION		3. PAGE _____ OF _____ PAGES						
4. CARGO (To be completed by the unit or shipper Transportation Office (TO))								
UN/ID NUMBER a.	PROPER SHIPPING NAME (Include RQ, Technical Names, Additional Information per 49 CFR172.203, as required.) b.	HAZARD CLASS/ DIVISION c.	SUBSIDIARY HAZARD d.	PACKING GROUP (PG) e.	PACKAGES		TOTAL NET QUANTITY h.	TOTAL AMMO (NEW) i.
					NUMBER f.	KIND g.		
5. CONSIGNEE NAME								
6. REMARKS								
7.a. COPY OF EMERGENCY RESPONSE GUIDE NUMBER(S)								
b. EMERGENCY NOTIFICATION. In all cases of accident, breakdown or fire, promptly call emergency assistance telephone number(s) in Item 7c below and then shipper and/or consignee in Item 2 above, in that order.								
c. 24-HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBERS:								
DOD NON-EXPLOSIVE HAZMAT: 1-800-851-8061  AT SEA: COLLECT: 1-804-279-3131	DOD HAZ CLASS 1 (EXPLOSIVES) ONLY: <b>(703) 697-0218</b> or 0219 (COLLECT)  OR <b>DSN 227-0218</b> (WATCH OFFICER)	CHEMICAL/BIOLOGICAL WARFARE MATERIAL DUTY HOURS: <b>DSN 584-3044, 584-7211,</b> <b>584-6455,</b> <b>Comm. (410) 436-3044,</b> <b>(410) 436-7211,</b> <b>(410) 436-6455</b> AFTER DUTY HOURS: <b>DSN 584-2148,</b> <b>Comm. (410) 436-2148</b> (Ask for TEU S3)	SECURE HOLDING: Non-AA&E: <b>1-800-524-0331</b> AA&E: <b>1-800-826-0794</b> OIL AND CHEMICAL SPILLS: NATIONAL RESPONSE CENTER (NRC) AND TERRORIST HOTLINE: <b>1-800-424-8802</b> AT SEA: <b>202-267-2675</b> (COLLECT)	DOD RADIOACTIVE MATERIALS: ARMY: <b>(703) 697-0218</b> (COLLECT) USAF: <b>(202) 767-4011</b> (COLLECT) USN/MC: Use 24-hour emergency response phone number provided by USN/MC activity initiating shipment. DLA: <b>1-800-851-8061</b> (AT SEA: <b>(804) 279-3131</b> )				
8. SHIPPER'S CERTIFICATION This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the regulations of the Department of Transportation.								
a. TYPE OR PRINT NAME OF SHIPPER CERTIFIER		c. SIGNATURE(S) OF VEHICLE OPERATOR(S)						
b. SIGNATURE OF SHIPPER CERTIFIER AND DATE								

# LOADING PROCEDURES

# Driver Responsibilities During Loading Operations

During loading operation the driver will ensure:

- Vehicle is correctly positioned at the loading area.
- Engine is shut off, vehicle is in parking gear.  
**(Never load with the engine turned on)**
- Parking brake applied, wheel chocks are

# Driver Responsibilities During Loading Operations (cont)

- The driver will not back up before first checking for clearance, after sounding a warning and utilizing ground guide.
- One person shall remain in the cab of a diesel-powered vehicle. There is a possibility that a warm engine could self-start if the vehicle should roll. The transmission shall be left in neutral and the parking brake applied.

# Driver Responsibilities Prior to Release of a Loaded Vehicle

The driver shall check the following items:

- Inspect the load to ensure no containers are leaking, broken, or that breakage could occur during shipment.
- Verify that the load does not exceed the vehicles maximum weight and distribution limits.

# Driver Responsibilities Prior to Release of a Loaded Vehicle

## (cont)

- Ensure the cargo is blocked and braced securely.
- Check the shipping documents and compare to the placards.
- Check the quantity and type of the load and compare to the DD Form 836.

# Cargo Handling Precautions

During loading:

- A&E shall be secured to prevent movement in the vehicle.
- Loading/unloading shall be under the direction of qualified personnel.
- A&E shall not be placed near the vehicle's exhaust tailpipes.
- A&E shall not be thrown, dropped, slid, pulled, or tumbled.

# In-Transit Regulations

# General Rules for Safe Driving

- Adhere to posted speed limits and/or established speed limits for vehicles transporting A&E.
- Never operate a vehicle while under the influence of alcohol, illegal drugs, or a derivative of a narcotic drug, or use/misuse of a prescription drug.

# Right of Way

- All emergency vehicles with flashing lights/sirens have the right of way over all other traffic.
- Military formations, whether halted or in motion, have the right of way. Use caution when passing or approaching such formations.

# Tunnels

- Always attempt to avoid tunnels.
- If use of a tunnel is necessary, contact local law enforcement for permission and instructions.
- Advise law enforcement if unable to meet scheduled time for tunnel use.

# Railroad Crossings

- Always look both directions and exercise extreme caution when crossing.
- Use four-way flashers when 300 feet from rail crossing.
- Come to full stop between 15-50 feet from tracks.
- Look in both directions and cross when clear.

# Railroad Crossings (cont)

- Not required to stop at:
  - Streetcar crossings
  - Railroad crossing with police officer/watchperson directing traffic
  - Crossings marked exempt by proper state authority

# Convoys

- Maintain a safe distance between vehicles, no more than 300 feet apart, no closer than 50 feet.

# Bridges

- Approach drawbridges carefully in case of traffic or rising drawbridge.
- If the driver must cross a toll bridge in route, the driver must contact local authorities and law enforcement in advance for instructions and permissions.

# Heavily Populated Areas

- Avoid heavily populated areas, tunnels, alleys, etc unless no practical alternative is available.
- Operational convenience is not a basis for passing through a heavily populated area.
- Contact local law enforcement for instructions for driving though populated area.

# Stops

- Do not make any unscheduled stops, except in emergency cases.
- One driver shall maintain constant surveillance of the A&E. No further than 25 feet of the A&E at any time.

# Weather Conditions

- Drivers must be extremely cautious during severe weather such as snow, rain, and fog.
- Do not expose A&E to inclement weather such as rain and lightning.
- The Installation Commander/Unit Commander or Convoy Commander will make the determination to cease

# Flame-Producing Devices

- No driver/ammo handlers or guards shall carry any flame producing devices while transporting A&E.
- Smoking is prohibited when transporting A&E.
- Smoking is prohibited within 25 feet of vehicles loaded with A&E.

# Procedures Following an Accident

- Stop the vehicle and turn off ignition.
- Brake and chock vehicle.
- Post warning devices.
- In case of fire attempt to extinguish the fire, make every effort necessary to prevent the fire from reaching the cargo with fire response equipment.
- If the fire reaches the cargo evacuate the area to minimum standoff distances
- Notify local law enforcement authorities.

# Procedures Following an Accident (cont)

- Render first aid, if necessary.
- Notify shipping and receiving authorities.
- Notify your Chain of Command
- Notify Army Operations Center
- Provide Emergency response crews with DD Form 836 special instructions and excerpts from the ERG.

# Procedures Following an Accident (cont)

- Do not handle or unload damaged A & E.
- Do not sign any insurance or release forms.
- Assist emergency crews as required.

# Preparation of Motor Vehicle Accident Report, SF 91

- Every accident, no matter how minor, must be reported on Motor Vehicle Accident Report, SF 91.
- SF 91 must be carried by driver at all times.
- SF 91 is divided into 13 sections.
- Step by step instructions are provided in the Drivers Handbook.

# Procedures Following Breakdown While In-Transit

- Driver must ensure safety of public and security of load if breakdown occurs.
- Do not attempt to jump start vehicle loaded with A&E.
- Turn on hazard signals and park in a safe spot far off highway if applicable.
- Inform law enforcement authorities and destination activity location of breakdown.

# Procedures Following a Breakdown

## While In-Transit (cont)

- Attempt to arrange for on site repair.
- If on-site repairs are not feasible, have alternate vehicle dispatched.
- Complete report required for safety or duty officer.

# Transfer of Load in Transit

- 1.1, 1.2, 1.3 A&E and 6.1 (poisons) shall not be transferred from one vehicle to another while in-transit, unless of an emergency.
- If transfer is required, the driver will do the following:
  - Move to a safe location away from the highway
  - Driver shall turn off engine and brake vehicle

# Transfer of Load in Transit (cont)

- Turn on the vehicles hazard warning signals and post the emergency warning devices.
- Provide constant surveillance over the vehicle

# Procedures for Refueling an A&E Loaded Vehicle

- **Always ensure that the vehicle is fueled prior to loading!!!!**
- Refueling instructions are provided in the Drivers Handbook **\*\*utilized as a last resort only\*\***

# Procedures for Refueling an A &E Loaded Vehicle for transportation over 100 miles

- Ensure engine and lights turned off.
- One driver shall stand by with fire extinguisher.
- Keep nozzle of fuel hose in constant and firm contact with the intake pipe of the fuel tank.
- Do not fuel simultaneously with other vehicles.
- One person must be in constant control of the fueling process.
- Ensure any spilled fuel is washed down and the vehicle is moved at least 50 feet from spill.
- No person may smoke within 25 feet of A&E loaded vehicle.

# Parking an A&E Loaded Motor Vehicle

- Vehicles carrying 1.1-1.3 explosives shall not park in public areas (garages or parking lots).
- Never leave the vehicle loaded with A&E unattended.
- Do not operate vehicle 100 feet from fuel storage areas or over oil-soaked areas.

# Parking an A&E Loaded Motor Vehicle

## Cont'd

- Do not park within 300 feet of bridges, tunnels, dwellings, places where people work, congregate, or assemble.
- Do not park within 5 feet from traveled portion of road if pull over.
- Do not park on private property.

**A&E SECURITY**

# A&E SECURITY

- Drivers must follow security policies, procedures and responsibilities to safeguard A&E.
- A&E is categorized into four security risk codes: Categories I, II, III, IV.
- Security risk codes are based on readiness to fire, portability, and potential to inflict casualties or destroy property.

# A&E SECURITY (cont)

- Category 1
  - Missiles and rockets in a ready to fire configuration (i.e. AT-4, Javelin)
- Category 2
  - Grenades (HE), mines, explosive for demo, TOW
- Category 3
  - .50 cal or larger, incendiary grenades, fuses for HE, blasting caps, det cord
- Category 4
  - Ammo w/ non explosive projectile, illumination, CS and smoke grenades

# A&E SECURITY (cont)

- MCO 5530.14A
  - MARINE CORPS PHYSICAL SECURITY PROGRAM MANUAL
  - Category I Ammunition. All Category I ammunition will require an officer or staff noncommissioned officer to receipt for and transport the materiel. Additionally, one armed guard is required per vehicle to provide security during the movement of the materiel. (1-SNCO Officer Armed & 1- Additional guard)
  - Category II, III and IV Ammunition. One armed guard is required per vehicle for all Category II, III and IV ammunition regardless of whether transporting on or off base. (1- Armed guard per vehicle)

# A&E SECURITY

- Weapons and ammo specific to the weapons will not be transported on the same vehicle.
- One individual shall maintain constant surveillance of the A&E. No further than 25 feet of the A&E at any time.

# **FIRE PREVENTION AND REGULATIONS**

# Fire Prevention

- Motor vehicles transporting A&E shall not be driven past fires of any kind burning on or near the highway until the driver has determined that passing can be made safely and without stopping.
- A motor vehicle containing A&E may not be parked within 300 feet of an open fire.

# Fire Regulations

The driver of a motor vehicle transporting A&E shall know the contents of the load and the hazards of the load. They shall have knowledge of the following:

- Type of cargo, number of packages, total weight.

# Fire Regulations (cont)

- Hazard Class/Division, Compatibility Group, UN Number, Proper Shipping Name, Net Explosive Weight (NEW).
- Required placards
- Safe Driving Regulations
- Warning Instructions
- Emergency Response telephone numbers.

# Fire Regulations (cont)

- Explosive drivers shall be provided with emergency response/fire fighting information appropriate to the specific loads that they are transporting.
- This information will be found on the DD Form 836. Emergency Response Guide (ERG) information applicable to the transportation of A&E is attached to the DD Form 836.

# Fire Regulations (cont)

- The ERG information appropriate to the A&E being transported must be attached to the DD Form 836. The driver shall read sign and carry these instructions with them at all times while transporting A&E.

# Fire Fighting Procedures

- Should a fire occur in a vehicle transporting A&E, the driver shall park as far away from the highway or congested area as possible.

# Fire Fighting Procedures (cont)

## Vehicle Fires

- If any part other than the cargo catches fire, the driver shall use the hand extinguishers immediately and attempt to extinguish the fire. The driver shall make every effort necessary to prevent the fire from reaching the cargo.

# Fire Fighting Procedures (cont)

## Cargo Fires

- Do not attempt to fight a fire that has reached the cargo area. If the fire does reach the cargo area, withdraw from the area and:
  - Call emergency response numbers
  - Contact local law enforcement/fire department and provide specific emergency response information (DD Form 836)
  - Warn the public and evacuate any person from the area in accordance with the instructions specified on the DD Form 836.

# Fire Extinguishers

- Each motor vehicle transporting A&E shall be equipped with one portable fire extinguisher.
- Dry Chemical - 10 B:C or greater capacity
- Multipurpose Dry Chemical - 2½ A/10 B:C



# Fire Extinguishers (cont)

- The fire extinguisher shall be properly filled, bracket-mounted, and easily accessible for use.
- Inspections of fire extinguishers shall be conducted monthly to ensure proper function.